

ANNUAL REPORT

ON

The Health of the Urban District

OF

SADDLEWORTH,

FOR THE YEAR

1900,

BY

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OF

## SADDLEWORTH.

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DOBCROSS,

JANUARY, 1901.

*To the District Council of the Urban Sanitary District of  
Saddleworth.*

GENTLEMEN,

I present, as required, my report on the health of your district for the year 1900. I have, however, only acted as your Medical Officer of Health since July, succeeding my father, the late Dr. W. H. F. Ramsden, who has occupied the position for a large number of years.

On April 9th, 1900, the Urban Sanitary District of Uppermill, with a population estimated at 1,700, and an area of 108 acres, was combined with the Rural Sanitary District of Saddleworth, without, however, its Strinesdale and Lydgate portions, which were added to the Springhead Sanitary Authority. The name adopted for this combination was the Urban Sanitary District of Saddleworth.

The estimated population for 1900 of the Strinesdale portion was 761, and of the Lydgate portion 499. Deducting these from the figures for the late Rural Sanitary District of Saddleworth, we obtain 11,896 inhabitants. If to this we add 1,700, the estimated population of Uppermill, we get a total of 13,596, which is, therefore, the population, estimated to the middle of 1900, for the Urban Sanitary District of Saddleworth.

During the past year the rates were  $3/9$  in the £, including a District Rate of  $2/6$  and a Poor Rate of  $1/3$  in the £; the former rate includes Lighting, Sanitary, and Special Sanitary Rates.

The gross estimated Rental was £94,818. The rateable value of agricultural land was £5,731 1s., and of buildings, etc., £67,921 18s.

The number of births registered during the year was 285, of which 145 were males and 140 females. There were 10 illegitimate births. The estimated BIRTH-RATE is 20·9 per 1,000 inhabitants. Of the 285 children born, 17 died under the age of 1 year, as against 37 in 1899. This means that

59·6 children died out of every 1,000 born under the age of 1 year. The natural increase of population, represented by the excess of births over deaths, was 90. As regards still-births, I have, as yet, no available information.

The deaths registered during the year were 195 in number. Of these, 102 were males, and 93 females. The DEATH-RATE is estimated at 14·3 per 1,000 inhabitants, and is one of the lowest there is any record of.

The number of deaths classified according to AGE are :

	1900.
Under 1 year .....	18
Between 1 year and 5.....	19
"    5    "    15.....	5
"    15    "    25.....	7
"    25    "    65.....	95
Over 65 .....	51

Tabulated according to the CAUSE OF DEATH the numbers are :

	1900.
Smallpox .....	0
Measles .....	6
Scarlet Fever .....	0
Whooping Cough .....	0
Diphtheria .....	0
Membranous Croup .....	1
Typhoid Fever .....	3
Epidemic Influenza ...	4
Diarrhœa .....	0
Enteritis .....	5
Puerperal Fever.....	1
Erysipelas .....	0
Other Septic Diseases .....	1
Phthisis .....	13
Other Tubercular Diseases .....	5
Cancer, Malignant Disease .....	12
Bronchitis, Pneumonia, and Pleurisy.....	24
Alcoholism and Cirrhosis of Liver .....	6
Premature Birth .....	2
Diseases and Accidents of Parturition.....	2
Heart Disease .....	32
Inquests .....	12
Uncertified .....	5
All Other Diseases .....	61

The deaths from the seven principal zymotic diseases were 10 in number, giving a ZYMOTIC DEATH-RATE of 0·73 per 1,000, as contrasted with 0·538 in 1899 and 0·74 in 1898.

The following table is given for the purpose of comparing the ZYMOTIC DEATH-RATE for the last 3 years :

	Small-pox.	Measles.	Scarlet Fever.	Diphtheria & Croup.	Whooping Cough.	Fevers and Typhoid	Zymotic Diarrhœa.
1898 .....	...	0·2	...	...	·06	0·2	0·26
1899 .....	...	...	...	0·134	0·134	0·134	0·134
1900 .....	...	0·44	...	0·073	...	0·21	...



The following is a table showing the NUMBER OF DEATHS from  
zymotic disease during the last decade :

	Small- pox.	Measles.	Scarlet Fever.	Diph- theria & Croup.	Whoop- ing Cough.	Fevers and Typhoid	Zymotic Diarr- hœa.
1890 .....	...	8	3	2	1	2	1
1891 .....	...	2	2	1	1	1	5
1892 .....	...	10	4	7	7	3	...
1893 .....	2	2	3	4	3	3	1
1894 .....	...	2	3	...	5	1	2
1895 .....	4	9	2	6	4	1	3
1896 .....	...	3	4	12	6	2	...
1897 .....	...	...	3	8	...	3	2
1898 .....	...	3	...	...	1	3	4
1899 .....	...	...	...	2	2	2	2
Averages for the years 1890 to 1899	0·6	3·9	2·4	4·2	3·0	2·1	2·0
1900 .....	...	6	...	1	...	3	...

The deaths from Bronchitis, Pneumonia, and Pleurisy were 24 in number. This gives a RESPIRATORY DEATH-RATE of 1·76 per 1,000. During the past 3 years it was as follows :

1898.	1899.	1900.
—	—	—
2·15	2·76	1·76

There were 14 deaths from Phthisis, giving a PHTHISICAL DEATH-RATE for the year of 1·03 per 1,000. For comparison I give the death-rate for the past 3 years :

1898.	1899.	1900.
—	—	—
1·146	1·145	1·03

For registration purposes, Saddleworth is divided by the road proceeding from Standedge through New Delph and Cross Keys to the Star Inn, Highmoor; there the road turns sharply to the left, and proceeds by Lydgate to Mossley. The portion of Saddleworth on the right is in the Delph Sub-district, whilst that on the left belongs to the Uppermill Sub-district. The former includes Bleak Hey

Nook, Castleshaw, Sandbed, New Delph (a portion), Delph, Slackcote, and Denshaw; whilst the latter includes Diggle Edge, a portion of New Delph, Diggle, Weakey, Woolroad, Dobcross, Wall Hill, Saddleworth Fold, Uppermill, Greenfield, Royal George, and Grasscroft. The population, according to the census of 1881, was 5,423 in the Delph Sub-district, and 8,838 in the Uppermill Sub-district. (The latter figure includes 1,384, the population of the late Urban district of Uppermill, also the Strinesdale and Lydgate portions of Saddleworth). In the 1891 census the Delph Sub-district was 5,221, showing a decrease in population of 202; whilst the Uppermill Sub-district had a population of 9,387, or an increase of 549 inhabitants. As formerly constituted, the population of the Delph Sub-district for 1900 would have been estimated at 5,250 inhabitants, and that of the Uppermill one, 9,606. But the former includes 1,125 and the latter 135, the figures representing the population of the Lydgate and Strinesdale portions that are now added to the Springhead Authority. Deducting these, the population of the Delph Sub-district is 4,125, and that of the Uppermill Sub-district, 9,471.

For purposes of COMPARISON I give the following table :

	DELPH SUB-DISTRICT.	UPPERMILL SUB-DISTRICT.
Births .....	89	196
<i>Males</i> .....	48	97
<i>Females</i> .....	41	99
Birth-rate .....	21·5	20·7
Illegitimate births .....	6	4
Deaths .....	58	137
<i>Males</i> .....	32	70
<i>Females</i> .....	26	67
Death-rate.....	14	14·4
Uncertified deaths .....	2	4
Inquests.....	3	9
Infant Mortality .....	45	71·4
Zymotic death-rate.....	1·69	0·316

Tabulated according to the CAUSE OF DEATH the numbers are :

	DELPH SUB-DISTRICT.	UPPERMILL SUB-DISTRICT.
Smallpox .....	0	0
Scarlet Fever .....	0	0
Diphtheria .....	0	0
Membranous Croup.....	1	0
Typhoid Fever.....	2	1
Puerperal Fever .....	1	0
Erysipelas .....	0	0
Pyæmia .....	0	1
Measles .....	4	2
Whooping Cough .....	0	0
Diarrhœa and Dysentery .....	0	0
Rheumatic Fever.....	1	0
Phthisis .....	4	9
Other Tubercular Diseases .....	0	5
Bronchitis, Pneumonia, & Pleurisy	9	15
Heart Disease .....	6	26
Influenza .....	0	4
Inquests .....	3	9
Uncertified .....	1	4
Malignant Disease .....	4	8
Alcoholism & Cirrhosis of Liver .	2	4
Premature Birth .....	1	1
Enteritis .....	2	3
All other Causes .....	17	45

Classified according to AGE the deaths are as follows :

Under 1 year .....	4	.....	14
Between 1 year and 5.....	8	.....	10
"    5    "    15.....	1	.....	4
"    15    "    25.....	6	.....	2
"    25    "    65.....	28	.....	67
Over 65 .....	11	.....	40

Tabulating the DEATHS IN MONTHS, the returns are :

	DELPH	UPPERMILL	
	SUB-DISTRICT.	SUB-DISTRICT.	TOTAL.
January .....	6	13	19
February .....	1	11	12
March .....	4	12	16
April.....	5	12	17
May .....	6	15	21
June .....	3	6	9
July .....	4	10	14
August .....	5	9	14
September .....	10	9	19
October .....	5	13	18
November .....	4	9	13
December .....	5	18	23

The following is a table showing the NUMBER OF NOTIFICATIONS of the Notifiable Diseases received during the past four years, arranged in districts :

	DELPH SUB-DIVISION.				UPPERMILL SUB-DIVISION.			
	1897.	1898.	1899.	1900.	1897.	1898.	1899.	1900.
Smallpox .....	0	0	0	1	0	0	0	1
Scarlet Fever ...	1	2	5	4	13	13	5	12
Diphtheria .....	1	1	0	1	11	1	5	3
Croup (Mem's) .	4	1	1	1	2	0	0	1
Enteric Fever...	3	4	6	6	19	17	8	1
Continued Fever	1	0	0	0	1	1	0	0
Puerperal Fever.	1	0	0	1	1	0	0	2
Erysipelas .....	7	5	7	4	8	6	5	7
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
	18	13	19	18	55	38	23	27

The distribution of these diseases during 1900 in MONTHS was as follows :

[illegible]



## UPPERMILL SUB-DISTRICT.

January .....	...	...	...	...	...	...	...
February ...	...	I	...	...	...	...	...
March .....	...	4	...	...	...	...	...
April .....	...	2	...	I	...	...	...
May .....	...	3	...	...	...	I	...
June .....	...	...	...	...	...	...	I
July .....	I	I	...	...	I	...	...
August .....	...	...	...	...	...	I	...
September...	...	...	...	...	...	I	...
October ...	...	...	...	...	...	I	I
November...	...	2	...	...	...	I	...
December ...	...	2	...	...	...	I	...

Classifying the NOTIFICATION RETURNS IN MONTHS we have the following figures :

	DELPH SUB-DISTRICT.	UPPERMILL SUB-DISTRICT.	TOTAL.
January .....	I	0	I
February .....	I	I	2
March .....	3	4	7
April.....	5	3	8
May .....	I	4	5
June .....	4	I	5
July .....	I	4	5
August .....	0	I	I
September .....	I	I	2
October .....	0	2	2
November .....	I	3	4
December .....	0	3	3

These tables indicate that April, May, December, and March, in their respective order, were the unhealthiest months, whilst June, August, February, and November were the healthiest.

The zymotic diseases notified during 1900 were 45 in number, as against 42 in 1899, 51 in 1898, and 73 in 1897. The epidemic of Scarlet Fever accounts for the bulk of the notifications during the past year. Deducting from these figures the numbers due to Smallpox, Scarlet Fever, Diphtheria, and Membranous Croup, and leaving those with which defective drainage and bad hygienic surroundings are more particularly associated, we obtain the following table :

	1897.	1898.	1899.	1900.
Enteric Fever.....	22	21	14	7
Continued Fever .....	2	I	0	0
Puerperal Fever.....	2	0	0	3
Erysipelas .....	15	11	12	11
	<hr/> 41	<hr/> 33	<hr/> 28	<hr/> 21

These figures, which represent diseases associated with bad drainage, indicate a great improvement in the sanitary condition of your district, and shew the influence that drainage and a better water supply have had on the general health. If to these factors could be added the better housing of cattle, still greater improvement would follow, particularly in such diseases as Tuberculosis, Scarlet Fever, and probably Diphtheria and Enteric Fever.

*Smallpox.*—On June 29th, my father, your late Medical Officer of Health, found that Walter Andrew, of Dumfries, was suffering from this disease. He at once took steps to have the Smallpox Hospital at Runninghill re-opened : a

nurse and attendants were secured, and the patient removed thither the day but one after the recognition of the case. The suggestion made is that Andrew, who was a clogger, was infected from a pair of shoes he had mended, the property of a nurse engaged in the Smallpox Hospital at Strinesdale. I have, however, a communication from Dr. Wilkinson, the Medical Officer of Health for Oldham, in which he states : " I am assured that these shoes had never been worn in the hospital." A fortnight later Alice Hudson, residing at Stones, Delph, was found to be suffering from the same disease. Here, again, the source of infection was thought to have been the Strinesdale Hospital. I took immediate steps to have her removed to your Infectious Hospital. Her home was thoroughly disinfected and the bedding destroyed. All persons who were known to have been, or were thought to have been, in contact with the cases of smallpox were re-vaccinated, and it is due to this action, and the prompt removal of the cases, that I have no further outbreak to record. Both patients made a good recovery.

These cases are directly traceable to Russia, where a man from Stalybridge named Frank Ambler (a machinist), contracted the disease ; feeling very ill, he at once determined to come home, and did so on April 20th, travelling via Flushing, Queensboro', London, and Manchester. Strangely enough, no one at any of these places recognized the disease, although it was distinctly recognizable. Between London and Manchester, he had three fellow-passengers in the same compartment, one from Oldham, another from Bolton, and a third from Carlisle. Each of these subsequently fell sick of the disease in their respective homes. Between Manchester and Stalybridge, he infected a Stalybridge man who happened to travel with him. The Oldham case, with others in its train, were removed to the Smallpox Hospital at Strinesdale, and it would seem that it is to these cases that yours are traceable. It is certainly a most scandalous thing that a man showing every sign of smallpox should have been allowed to arrive at Queensboro', and thence through London to Stalybridge, without the disease having been recognised. This want of recognition has caused outbreaks of the disease at Oldham, Bolton, Carlisle, Manchester and Saddleworth.

I should like to point out here the danger people incur in going near smallpox hospitals. The contagion of smallpox is carried by the air, and people passing near a hospital run grave risks of contracting the disease. Repeatedly, during the time your hospital at Runninghill was occupied, have I had to urge the folly of people passing near the hospital, which they persist in doing, despite a notice of warning.

*Scarlet Fever.*—Scarlet Fever was notified 16 times—4 times in the Delph Sub-district and 12 times in the Uppermill Sub-district. In Delph, there was 1 case in February, 1 in April, 1 in May, and 1 in June. In Uppermill, 4 in March, 2 in April, 3 in May, 1 in July, and 2 in December. In the Delph District their distribution was :—Junction 1, Delph 3. In the Uppermill District :—Diggle 5 (4 being in one family at Yew Tree Cottages), Dobcross 1, Uppermill 1, Greenfield 4, Royal George 1. The origin of this epidemic could not be traced ; the first case occurred at Linfitts, whilst the second and third were as far removed as Diggle and Greenfield. The bulk of the notifications were made during March, April, and May, at which time the epidemic ceased, except for a case during July at Uppermill, and another one (imported from Waterhead) during June. During December, two cases were notified at the Brewery, Greenfield, in the same family. These were distinctly traceable to Herod, near Stalybridge, where the disease was epidemic, and where members of the family had been staying. In every case inspection was made, but no insanitary



conditions were found except at Intake, Delph, where the drains were defective. All the houses were thoroughly disinfected by formalin vapour by means of the al-formant lamp. It was not found necessary to close any of the schools. I am glad to say that the epidemic was of a fairly mild type, and no deaths resulted.

*Measles.*—Measles has, I regret to say, been almost constantly with us since February. In Uppermill and Dobcross it was so prevalent in the months of February and June that the Schools of those districts had many absentees on that account. The greatest vigilance was exercised by the teachers in keeping from school children from infected houses, but in March it was so prevalent that in Uppermill, the Wesleyan School had 50 absentees on that account during the week ending March 15th, and the Church School probably as many. It was therefore decided to close both the Church and Wesleyan Schools for the week ending March 23 d. Later, when the disease had become epidemic in Dobcross, the Church School there was closed for a week. After a period of quiescence during July, August, and September, the disease broke out in Delph in October. Here the same precautions were taken, though no necessity appeared for closing any of the schools. I should estimate that Delph had between 50 and 60 cases between October and November. By November the epidemic had spread to Diggle, where it remained more or less prevalent to the end of the year. The disease assumed a more virulent aspect during December, and accounted for two deaths in the Uppermill District, one at Diggle and the other at Tame-water. In the Delph Sub-division there were 4 deaths from the same cause, 2 occurring during October and 2 during November. While the school teachers did their utmost to prevent the spread of the disease, I regret to say that the same assistance was not given by many of the parents, some of whom will still persist in wilfully exposing their children to infection, believing that they *must* have the disease sooner or later, and that it is best to get it over.

*Enteric Fever.*—Enteric Fever was responsible for 7 notifications, 5 having reference to the Delph and 2 to the Uppermill Sub-division. In the Delph District 3 were at Old Tame, 1 at Denshaw, 1 at Mount Pleasant; whilst in the Uppermill District the one occurred near Saddleworth Church and the other in Uppermill. Much trouble was taken to trace the source of infection, especial attention being given to the milk and water supplies. In none of the cases, were the drains found to be at fault, except at Mount Pleasant, where the slopstone pipe was defective. In months the cases were distributed as follows:—February 1, April 1, June 1, July 2, September 1, November 1. One of the Uppermill cases resulted in death, and 2 of those at Old Tame were also fatal.

*Diphtheria.*—Diphtheria was notified 4 times—in February 1, April 1, and November 2. Three of the cases were in the Uppermill Sub-district, while the fourth was at Railway View, Delph. At the last named place a deposit of sewage was found near the house. As regards the Uppermill cases, 1 was at Shaw Hall Bank, 1 at Dobcross, and 1 at Spring Grove, Greenfield. The source of infection could not be ascertained. No insanitary condition was found, but at Spring Grove the trap in the slopstone pipe required alteration. In no case did death result.

*Croup.*—Membranous Croup was notified on two occasions in April, one occurring at Slackcote and the other at Diggle. The source of infection was not traceable, nor was any insanitary condition discovered. The former case resulted in death.

*Erysipelas.*—There were 11 notifications of Erysipelas—4 in the Delph Sub-district and 7 in the Uppermill Sub-district. In the Delph District their distribution was:—Junction 2, Beswicks 1, Delph 1. In the Uppermill District, Dobcross 2, Grasscroft 2, Tunstead 1, Greenfield 2. Nothing of an insanitary character was found on inspection, and none of the cases had a fatal termination.

*Puerperal Fever.*—Puerperal Fever was notified three times, and occurred in the months of March, June, and October respectively. In the Delph case, which ended fatally, the drains were defective, and passed underneath the floor of the house, and an untrapped slopstone pipe admitted foul air into the house. In the case at Greenfield the drainage was also defective, whilst in the third one no insanitary conditions were found, apart from its occurring in a back-to-back house.

The Infectious Diseases Notification Act was adopted on the 19th of December, 1889, the diseases notifiable being those scheduled under the Act. Measles and Whooping Cough are not included.

*Hospital for Infectious Diseases.*—The Notification of Infectious Disease has been a very important factor in dealing with these diseases, and would, in the case of Scarlet Fever and Diphtheria, be still greater, if an infectious hospital for the treatment of such cases were available. It is owing to the hospital at Runninghill that Smallpox has been so quickly stamped out, and there is no doubt Scarlet Fever could almost as readily be got rid of if an infectious hospital were available.

*Disinfection.*—The disinfection of infected premises is confined to the removal of the wall-paper, lime-washing, and subsequent fumigation by formalin vapour. There is no disinfecting apparatus for sterilizing clothing by super-saturated steam.

*Vaccination.*—This is only moderately carried out, the new Act not having proved very efficient, as the following figures (for 1900) show :

	DELPH SUB-DISTRICT.	UPPERMILL SUB-DISTRICT.
No. of Vaccinated Children.....	107	139
No. of Conscientious Objections...	35	67
No. not yet dealt with .....	40	33

These figures shew that out of 348 children, who were obliged to either accept vaccination or obtain certificates as "conscientious objectors," no less than 102 evaded vaccination by obtaining exemption orders; or, in other words, 102 out of 348, or one out of every three, remain unvaccinated. In 1898 over 1,000 Exemption Orders were obtained, during 1899, 64, and during 1900, 102; so that Saddleworth now contains over 1,166 unvaccinated children. This may prove to be a very serious matter for your district should Smallpox re-visit us, and the fact that it is now at Bradford does not lessen one's anxiety.

The Vaccination Act of 1898 has undoubtedly had the result of increasing the number of children vaccinated—*e.g.*, during 1897 there were 27 vaccinations; during 1898, 78; during 1899, 198; and during 1900, 246. Moreover, in the few years preceding 1898, when the old Act was not carried out, only one out of every eleven was vaccinated, whilst last year (1900) it was two out of three; so that the new Act has been of advantage, compared with the old Act when not put



into force. I am informed that in previous years, when the carrying out of the old one was strictly enforced, the proportion of vaccinated to unvaccinated was very much better; but during the few years immediately preceding 1898, when the law was a dead letter, only one out of eleven was vaccinated. The conclusion arrived at is, therefore, that the old Act, with all its faults, was more efficient, when properly carried out, than the one now in operation. The reason is, that many conscientious objectors do not really "object," as there many who have obtained the Exemption Order and afterwards had their children vaccinated.

*Protection of Milk Supplies.*—The L.G.B. in June, 1899, issued a model set of regulations for the guidance of Authorities wishing to exercise their power of framing regulations under Section 13 of the Cowsheds, Dairies, and Milkshops Orders of 1885. This your Authority adopted in 1900. I would urge that in all cowsheds you should aim at having 800 cubic feet of air space per head, sufficient light, and good water.

*Tuberculosis.*—Cattle are eminently prone to Tuberculosis (consumption), and particularly so if housed in dark, close, and ill-ventilated shippens. Cattle so affected are dangerous to health in two ways—firstly, by giving milk that may cause consumption in man; secondly, because their flesh may cause the disease, particularly if eaten in an insufficiently cooked state. The methods advisable to check the risk of such infection are these:

1. To boil all milk, particularly if intended for consumption by invalids or children.
2. To eat no meat from cattle affected with "grapes" or tuberculosis.
3. To prevent the cattle from becoming tuberculous by giving them well-ventilated and sanitary cowsheds.

To prevent meat from an animal affected with tuberculosis being eaten: (1) Animals should be tested by means of Tuberculin, and, if found to be so affected, should be slaughtered. (2) To keep a close watch on the carcasses of animals intended for human food. This, I regret to say, cannot be properly done under present conditions. The only adequate way would be to have a Public Abattoir, where the meat could be systematically inspected. Such a place would do away with many other evils, such as

- (a) Badly constructed and insanitary slaughterhouses, which are by no means ideal in your district.
- (b) The "blowing up" of carcasses—e.g., veal.
- (c) The throwing of offal on ashpits.
- (d) The keeping of offal too long a time on the premises.

Saddleworth is a large and scattered district, lying on the skirts of the Pennine Chain. It is very hilly, the geological evidence pointing to the hills having been worn through glacier action. The highest hill is 1,700 feet high, at the top of Chew Valley. For the most part, the district is situated over the millstone grit, although there is evidence of clay, particularly near Uppermill. The area, including the Lydgate and Strinesdale portions (the area of which I have not been able to ascertain) is  $17,663\frac{3}{4}$  acres, of which 8,200 is unenclosed moorland.

The water from the hills collects to form the River Tame, which, arising above Junction, passes through Delph, Tame Water, and Uppermill to Mossley, by Royal George. On its



way it receives the Hull brook from Castleshaw, as well as the Diggle and Greenfield brooks. Saddleworth has, therefore, one large valley passing from Junction to Greenfield, with three valleys opening into it from Castleshaw, Diggle, and Greenfield. The Greenfield valley is sub-divided into two; the one on the right, as we pass up the valley, being the Chew Valley and the one on the left Seal Bark. In the Greenfield valley, at Yeoman Hey, is the large reservoir belonging to the Ashton, Stalybridge, and Dukinfield Corporation, who are also constructing another reservoir higher up the valley. In the Castleshaw Valley the Oldham Corporation have two large reservoirs, and in the Junction valley they have another at New Year's Bridge.

The River Tame, formerly a beautiful trout stream, is, of course, spoilt by the effluents from the various mills. Since the Rivers Pollution Prevention Act came into force, means have been pretty generally adopted to purify the effluents, the process being generally one of precipitation by the addition of Aluminoferric, with subsequent filtration through sand. The practice of using the river as a tip has been abandoned, and the sewerage of the larger part of your district, with works for the treatment of sewage, has prevented the passing of the crude material into the stream; so that the river may now be said to be in a much more satisfactory condition.

As already indicated, the water supply of your district is very abundant, the chief sources being the Ashton, Stalybridge and Dukinfield Waterworks, at Bill's o' Jack's, and private wells. The former supplies Greenfield, Uppermill, Diggle, Dobcross, and the larger portion of Delph with water, whilst the houses on higher ground have private wells. Most of these wells are good, but a number of them are liable to be contaminated by surface water, and are, therefore, open to suspicion. When one reflects that most of the farms are situated on the hill-side, and are supplied by these wells, it is very important that the water supplying them should not be contaminated.

The water from the Yeoman Hey Waterworks is, though somewhat ferruginous, of a good potable character, and should be obtained wherever practicable. In 1899 they supplied 1391 houses, and in 1900, 1416. A portion of Greenfield is supplied by the reservoir, as contrasted with the rest of Saddleworth, which is supplied directly from the springs. The former has been complained about, people stating that at times it is very muddy and unfitted for use. This is now receiving attention.

The district of Denshaw is too elevated to use this source, but it should, if possible, obtain water from the New Year's Bridge reservoir. The higher levels about Denshaw could, no doubt, be supplied by means of a hydraulic ram, if the necessary consent could be obtained from the Oldham Corporation to supply them with this water.

Passing through the district, from Diggle to Royal George, is the Manchester and Huddersfield Canal, the boats plying on which are inspected from time to time by your Inspector. No boats are registered, as your Authority is not a Registration Authority.

The manufactured goods are woollen and cotton, but chiefly the former. There is a large iron foundry, several bleachworks, a laundry, a tannery, and works for the manufacture of size. There is little evidence that the employed suffer much in health from their employment; though, no doubt, the large number of women employed tends to a certain amount of infant mortality.

*Smoke Nuisances.*—There have been no prosecutions under this head.

*New Buildings.*—The erection of New Buildings is regulated by the Model Bye-Laws adopted by your Authority. The number of new houses erected during 1900 were 16, many of them being of brick, strongly contrast with the old houses, which are built of stone.

*Common Lodging House.*—There is one Common Lodging House at Delph. At present it is not registered, but, at my recommendation, your Authority has taken steps that will doubtless ensure its early registration.

*Slaughter Houses.*—The Slaughter Houses registered are 23 in number, of which only 16 are in use. These are: 5 in Greenfield, 2 at Dobcross, 1 in Diggle, 3 at Delph, 1 at Junction, and 4 in Uppermill. Although not ideal, they are as a rule, kept in good order.

*Insanitary Property.*—As regards the condition of the Square and Salterhebble, Delph, I have already made a report to your Authority. It will be within your recollection that I promised to go over these localities with your Chairman and certain members of your Council. This has been done, and I hope before long to be able to lay before you the exact condition of this disgracefully bad and insanitary area. At Millgate, Delph, there is also a block of property which is very insanitary—back-to-back houses, small rooms, the floors of the houses below the level of the road, and small outbuildings, into which a good deal of objectionable matter is thrown, in spite of notices erected near. This property, also, ought undoubtedly to receive your early attention.

*Scavenging.*—The Urban Sanitary District of Saddleworth may be roughly divided into six sub-districts—Greenfield, Uppermill, Dobcross, Diggle, Delph and Denshaw. With the single exception of Uppermill, all are deficient in arrangements for the systematic removal of refuse. This is a very wrong condition of affairs, and I would urge that each district has its own “tip,” with arrangements for the systematic removal of refuse, and not leave it to the mercies of the tenant or landlord. At Uppermill this is done at an annual cost of 3/- for each house. This works well, but would be still better if the removal were done at night instead of by day. It is true that at Greenfield a “tip” has been provided, but it is only for ashes, and does not meet the full requirements of the district. At Delph the want of such a place is particularly felt. Its provision would prevent the frequent sights of ashes and refuse being deposited almost anywhere, with little or no regard to adjacent houses. As things are, such objectionable features cannot but exist. I would like to add that my father has frequently urged the need of systematic scavenging, and invariably mentioned it in his last few annual reports.

*House Drainage.*—House drainage is, as a rule, good, and, of course, particularly so where the sewage pipes have been laid. In many of the other houses there is still much to be done—*e.g.*, in the way of disconnecting the slopstone pipes.

*Sewerage System.*—The laying down of Sewers and the erection of Sewage Works was completed and brought into action on December 31st, 1896. There are 4 separate drainage schemes in operation, the sewage in each being treated similarly.

These are—

- 1 The Delph, Dobcross, and Diggle Scheme, in which the main sewer is laid from Brownhill to Linfitts, passing through Tamewater and Delph. Branches



from New Delph (up to Lower Stones), Midgrove, Dobcross, and Diggle (up to Sam Lane), run into this, which discharges its sewage at the Outfall Works, near Brownhill Bridge. This is the only scheme which has sufficient land, to enable land-filtration to be carried out.

2. The Royal George and Grasscroft Scheme, in which sewers have been laid from near Greenfield Station to Royal George, and which receives branches from Shawhall and Grasscroft. The Sewage Works are near the River Tame close to Wright Mill.
3. The Greenfield and Friezland Scheme, in which sewers are laid from near Greenfield Station to Waterside, and which receives branches from Ladhill and Horsforth. The Works are near the River Tame, and close to Wellington Mills.
4. The Uppermill Scheme, in which sewers are laid along the principal streets of Uppermill, and discharge their contents into the Outfall Works, near the River Tame at Halls.

The method of purifying the sewage is to subject it to the action of Alumino-ferric placed in the inlet channels, and then pass it continuously through precipitation tanks, which are used together or in series, according to circumstances. After separation of the suspended matter, the clear sewage is filtered through beds of Polarite, which are worked intermittently to allow the necessary aëration. If not sufficiently purified, the effluent is subjected to a further course of land filtration (only possible in the Delph, Dobcross, and Diggle scheme), before allowing it to pass into the river. The sludge from the precipitation tanks is from time to time removed, and allowed to dry naturally in lagoons, when it is carted away and used as manure.

In the above schemes, it will be noticed that no mention is made of Junction and Slackcote; in the original scheme, the sewers from Delph were not to have ceased at Linfitts, but were to have been laid right away to Junction. This part has now been revived, and arrangements been made whereby sewers will be laid from Linfitts, along the course of the River Tame, to Denshaw Vale receiving branches from West View, Slackcote, New Tame, Old Tame, and Junction. The borrowing powers sanctioned by the Local Government Board were £4,499 with £500 for the additional filtering required. The Outfall Works will be the same as in the Delph, Dobcross, and Diggle scheme, as it is merely an extension of the latter.

On economical grounds, it has been urged that the Uppermill Scheme should be merged in the Greenfield and Friezland Scheme, also that the treatment of the Sewage is too costly. These remarks I fully endorse. I would recommend that the sewage be first run into settling tanks, to get rid of the bulk of its suspended matters. The effluent should then pass into a tank filled with medium-sized coke (Bacteria bed) with finer coke on the surface, to filter off most of the remaining material in suspension, and which would otherwise pass into the bed of coke and in time silt it up. After settling here for a while, the effluent should then be passed into another tank filled with coke, where the Bacteria swarming in the interstices would finish the purification. Of course these beds must be used intermittently, to permit the necessary aëration of the "bacteria beds." It is true that the present process gives fairly good results, although more care is required during Saturdays and Sundays, but it is much more expensive than a properly constructed arrangement, made on the lines above indicated.

METEOROLOGICAL REPORT.—I am indebted to Charles J. Batley, Esq., Assoc. M. Inst. C.E., and Resident Engineer at Piethorn, for the following Meteorological Report :

RAINFALL AT CASTLESHAW IN 1900.

Gauge, 875 feet 6 inches above sea-level.

DATE. 1900.	RAINFALL.	Greatest Fall in 24 hours,		No. of days on which rain fell.
	Inches.	Date.	Inches.	
January .....	4'86	6	1'04	26
February.....	3'79	26	1'09	15
March .....	'91	27	'32	10
April .....	2'60	11	'54	16
May .....	1'38	8	'42	12
June .....	5'96	11	1'50	19
July .....	3'54	12	'65	15
August.....	5'50	6	1'14	17
September ...	1'58	26	'44	13
October .....	5'84	28	'78	22
November ...	3'53	28	'68	23
December ...	5'61	30	'79	22
	45'10			210

With the exception of the year 1891, when the Rainfall was 50'93 inches, the past year has been the wettest recorded since 1887, when observations were commenced in this district.

It will be noticed that the Rainfall for the months of January, February (usually the driest month in the year), April, June, August, October, and December have been very wet, whilst that in March has been unusually small.

No exceptionally heavy falls have occurred in any one day, the heaviest being on the 11th of June, when 1½ inches fell during the 24 hours.

The number of days on which rain fell has, however, been large, and the fact of rain having fallen on 211 days out of the 365 days in the year indicates a persistently, if light, rainy year.

For the sake of comparison, I append a table showing the rainfall during the past 10 years.

RAINFALL IN INCHES AT CASTLESHAW.

Gauge—875ft. above Sea Level.

Year...	* 1891	1892	1893	1894	1895	1896	1897	1898	1899	1900
	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
January ...	2'78	3'17	1'30	3'90	2'43	2'11	1'67	3'27	6'15	4'86
February...	0'25	2'08	5'24	5'97	0'57	2'23	2'27	3'45	1'40	3'79
March ...	2'22	0'79	1'04	4'03	4'17	5'97	4'48	1'72	2'38	0'91
April ...	1'97	1'38	0'82	2'39	2'67	2'00	3'43	2'85	3'58	2'60
May ...	2'64	4'94	2'84	2'76	1'28	0'77	1'56	3'24	3'52	1'38
June ...	2'73	2'69	2'88	3'63	4'64	3'17	4'18	4'08	1'50	5'96
July ...	3'79	3'45	4'26	3'78	8'78	3'54	1'70	0'69	1'57	3'54
August ...	6'84	4'36	2'91	4'17	4'78	2'96	4'42	5'92	2'33	5'50
September	3'45	4'95	4'28	0'51	1'73	8'00	4'90	0'75	6'90	1'58
October ...	5'22	8'15	3'65	5'13	4'44	5'78	2'60	5'51	4'45	5'84
November	3'22	3'51	3'71	2'74	3'31	1'64	5'66	2'71	1'30	3'53
December	6'27	2'18	4'62	4'01	4'68	5'74	5'04	4'88	2'22	5'61
Yearly Total	41'38	42'65	37'55	43'02	43'48	43'91	41'91	39'07	37'20	45'10

\* Rainfall at Newton Heath.

In order that the returns during 1900 may be compared with previous years, it is obvious that it would be unfair to omit the Strinesdale and Lydgate portions, that were a part of the late Rural Sanitary District of Saddleworth, so recently as April, 1900. In the following table, therefore, the figures for the STRINESDALE AND LYDGATE PORTIONS are included:—

The late Rural Sanitary District of Saddleworth.						The late Urban Sanitary District of Uppermill.						The late Rural Sanitary District of Saddleworth, together with the late Urban Sanitary District of Uppermill.					
Year	Popula- tion.	No. of Births	Birth- Rate.	No. of Deaths	Death- rate.	Popula- tion.	No. of Births	Birth- rate.	No. of Deaths	Death- rate.	Popula- tion.	No. of Births.	Birth- rate.	No. of Deaths.	Death- rate.		
1890	12987	338	26.02	254	19.55	1600	53	33.1	31	19.37	14587	391	26.8	285	19.5		
1891	12999	349	26.84	257	19.7	1600	47	29.2	36	22.35	14608	396	27.1	293	20		
1892	13010	352	27.06	246	18.9	1620	59	36.4	26	16.05	14624	411	28.1	272	17.9		
1893	13022	375	28.7	219	16.8	1663	61	40.04	30	18.03	14688	436	29.6	249	17		
1894	13035	374	28.67	213	16.3	1675	54	32.2	29	17.3	14710	428	29.1	242	16.4		
1895	13047	318	24.3	218	16.7	1695	47	27.7	21	12.3	14742	365	24.7	239	16.2		
1896	13082	299	22.8	180	13.5	1695	36	21.2	29	16.1	14777	335	22.7	209	14.14		
1897	13117	285	21.7	198	15.0	1700	38	22.3	20	11.7	14816	323	21.8	218	14.7		
1898	13128	307	23.4	197	15.0	1700	32	18.82	26	15.29	14828	339	22.8	223	15		
1899	13144	269	20.4	198	15.06	1700	40	23.5	21	12.3	14844	309	20.8	219	14.7		
Average for the ten years 1890 to 1899						...	...	...	...	...	14722.9	373.3	25.35	244.9	16.55		
1890 ...						...	...	...	...	...	14856	308	19.8	209	14.07		

These figures show that there has been a gradual but distinct improvement in the death-rate. If we take an average for the 10 years from 1890 to 1899, and compare it with the same figure for 1900, we see still more clearly how much sanitation has influenced the mortality. For whilst during the decennium 1890-1899 the average death-rate was 16.55 per 1,000, in 1900 it was only 13.4 per 1,000. The birth-rate, however, shows a decrease; and this rather leads one to suspect that the population is not so great as estimated. The coming census, however, will throw light on this subject. It would, however, be still more valuable if taken quinquennially, that is every five years.



The number of deaths classified according to AGE are :

	1898.	1899.	1900.
Under 1 year .....	38 ...	39 ...	20
Between 1 year and 5...	19 ...	16 ...	18
„ 5 „ 15...	6 ...	3 ...	7
„ 15 „ 25...	9 ...	8 ...	12
„ 25 „ 65...	88 ...	81 ...	96
Over 65 .....	64 ...	72 ...	56

Tabulated according to the CAUSE OF DEATH the numbers are :

	1898.	1899.	1900.
Smallpox.....	0	0	0
Measles .....	3	0	6
Scarlet Fever.....	0	0	1
Whooping Cough .....	1	2	0
Diphtheria .....	0	1	0
Membranous Croup .....	0	1	1
Typhoid Fever .....	3	2	3
Epidemic Influenza .....	2	3	4
Diarrhoea .....	4	2	0
Enteritis.....	?	?	5
Puerperal Fever.....	0	0	2
Erysipelas .....	0	1	0
Other Septic Diseases .....	0	1	1
Phthisis .....	17	17	14
Other Tubercular Diseases.....	?	?	6
Cancer, Malignant Disease .....	?	12	12
Bronchitis, Pneumonia, and Pleurisy..	32	41	24
Alcoholism and Cirrhosis of Liver.....	?	?	6
Premature Birth .....	?	?	2
Diseases and Accidents of Parturition.	?	?	2
Heart Disease .....	30	22	34
Inquests.....	12	13	13
Uncertified .....	15	14	6
All Other Diseases .....	105	87	68

Altogether, the year has shown distinct improvement from a Sanitary point of view. The Death-rate is the lowest I have record of, whilst the Birth-rate is practically the same as that of 1899; it is curious that this rate has been gradually becoming lower each year, thus in 1891, the births numbered 391; 1893, 436; 1896, 335; and in 1900, 308. The number of Notifications received was rather more than in the previous year, but not nearly so great as in 1898 and 1897. This increase is, as already indicated, due to the epidemic of Scarlet Fever. The chief feature of the year however, was the extensive outbreak of Measles throughout the district.

In conclusion, I would urge your attention to the necessity for Systematic Scavenging to the condition of Salter-hebble and the Square, Delph, and to the registration of the Common Lodging House at Delph. I would also recommend your adoption of the Public Health Acts (Amendment) Act 1890, as it will give you power in some matters, over which, otherwise, you would have little control.

Appended is a copy of the Nuisance Inspector's Report.

I remain,

Yours faithfully,

HERBERT RAMSDEN.

# NUISANCE INSPECTOR'S REPORT

FOR THE YEAR 1900.

NUISANCES.	Unabated, 1899.	Reported, 1900.	Abated, 1900.	Unabated, 1900.
Accumulation of Ashes and Offensive Matter .....	1	41	40	2
Privies and Ashpits requiring Emptying .....	2	45	45	2
Defective Drainage .....	3	5	6	2
Insufficient Closet Accommodation .....	2	6	6	2
Number of Closets ordered to be erected .....	2	24	24	2
Defective Construction of Closets .....	...	5	4	1
New Ashpits ordered to be erected .....	2	6	7	1
Fouling of Water .....	1	2	3	...
Filthy Matter lying exposed .....	1	4	5	...
Slopstone Pipes disconnected and trapped .....	2	10	11	1
TOTAL ...	16	148	151	13

Slaughter Houses Examined .....	23
Present Number of Slaughter Houses .....	23
Number of Slaughter Houses being used .....	16
Plans of Property submitted .....	16

JOHN T. BRADBURY, *Nuisance Inspector.*